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ABSTRACT

This document on Canadian communication theory is divided into four major sections. The first section examines the work of Harold Innis as a distinctively Canadian effort to establish a theory of communications that is true to the realities of Canadian existence and yet is applicable to the history of communication in other parts of the world. The second section discusses time-binding versus space-binding communication. Time and space are defined as short distance and long distance communication, and they are discussed in terms of communications technology. The third section examines monopolistic versus pluralistic communication and discusses Innis' notion of a monopoly of knowledge, which argues that communication by its nature possesses a bias which can be dangerous if centralized. The fourth section of this document examines the basic intention of Innis' work in terms of his position as an historian. (TS)

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Canadian Communication Theory: Extensions and Interpretations of Harold Innis*

James W. Carey

I

Despite the simplification, it is possible to describe Canadian communication theory by an arc running from Harold Innis to Marshall McLuhan. "It would be more impressive," as Oscar Wilde said staring up at Niagara Falls, "if it ran the other way." McLuhan took Innis' economic and political theory of communications and stretched it out to encompass modern literary theory as well. Perhaps "stretched" is not the right verb, for when McLuhan finished with Innis little remained of economics and politics that was recognizable. McLuhan's original motive was sound enough: it was necessary to dislodge Innis' work from its rather too geographical and material base and move it toward a more inclusive cultural analysis. That work still remains to be done, though it is refreshing to see Canadian scholars such as Donald Theall attempting it once again.*

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*McLuhan's attempts unfortunately ended, and there is a cautionary tale here, in a Whitmanesque hymn to technology, a hymn best described, for it has predecessors and successors, as part of the "rhetoric of the electrical sublime." I have taken these matters up at some length in "Harold Adams Innis and Marshal McLuhan," Antioch Review, 1967, Vol. 67, No. 1, pp. 5-31 and with my colleague John J. Quirk in a two part essay, "The Mythos of the Electronic Revolution," The American Scholar, 1970, Vol. 39, Nos. 2 and 3, pp. 219-241, 395-424.

While it may be unfair, then, to say that Canadian communication theory ended with Innis, it certainly began with him. Innis' work represents the distinctively Canadian effort to erect a theory of communications that is true to the realities of Canadian existence yet possesses, as well, applicability to

*From: Studies in Canadian Communications, Gertrude Joch Robinson and Donald F. Theall (eds.), Montreal Programme in Communications, McGill University, 1975, pp. 27-59.

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the history of communications in other countries and on other continents. While his work is often opaque, often tedious, often badly written, he left a body of historical and theoretical speculation that sets out the major dimensions of communications history and the critical propositions of communication theory. Much remains to be done, of course, both in moving outward to a more systematic cultural analysis and in altering the entire framework to fit subsequent advances in the social sciences. Yet I have no doubts concerning the singularity and power of his achievement.

Now I realize this view is not widely shared in American scholarship. There are at least two reasons why Innis' work has had little impact on American thought. First, in the United States a monopoly of knowledge has grown up that has successfully resisted the penetration of Canadian scholarship generally and Canadian communication theory specifically. For example, an international conference on communications technology and social policy hold in Philadelphia in 1972 was remarkable for, among other things, the virtual absence of any reference to Harold Innis, or for that matter the work of virtually any other Canadian scholar.*

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*The proceedings of the conference were edited by George Gerbner and others and published under the title Communications Technology and Social Policy: Understanding the "New" Cultural Revolution, New York: John Wiley, 1973.

It was not merely that Innis' name and work went uncited, but the principal concepts and propositions of his scholarship made no dent on the proceedings, were missing from the papers even of those persons familiar with the work. The conference papers, while often useful, were almost universally ahistorical, proceeding as if Canadian and other national traditions had not addressed the

very problems before the conference. While several essays surveyed the positive potentials of modern communications technology, few emphasized the limitations of communications technology in ameliorating social problems, the bias inherent in technology, the monopoly of knowledge supported by various communication technologies and the formulations which support them. While economics entered several analyses, it was largely as cost/benefit analysis and not in terms of the larger questions of social change, selective advantage, cultural stability and collapse that were at the center of Innis' work. Similarly, politics entered the discussions largely in terms of the mechanics of decision making and rule rather than in terms of the legitimacy of authority. Finally, while every methodology was implicitly or explicitly utilized, dialectics was ignored even by those participants with commitments to Marxism. These are, of course, the central terms of Innis: limitation, bias, monopoly, change, stability, collapse, legitimacy, dialectics.

While the conference was international in scope, its proceedings, as befits its location, were dominated by Americans. In the United States a virtual monopoly of knowledge exists that dictates that the central terms of communication theory must derive from psychological behaviorism or a distorted species of pragmatism and this monopoly virtually excludes serious attention to Innis' work.

There is a second reason that Innis has had relatively little impact on American scholarship. While this second factor is but a reverse of the first, it is particularly relevant to the larger purposes I wish to pursue here.

Innis not only was a Canadian by citizenship but wrote against the background of Canadian history and in terms of Canadian needs and necessities. He was in no sense a simple minded nationalist, but he did believe that social science inevitably reflected an ethnocentric bias. In a certain sense he accepted the

bias of the printing press and tried to overcome it. He recognized that scholarship was not produced in a historical and cultural vacuum but reflects the hopes and aspirations of national cultures. American and British scholarship was based, he thought, on a conceit: it pretended to discover Universal Truth, to proclaim Universal Laws and to describe a Universal Man. Upon inspection it appeared, however, its Universal Man resembled a type found around Cambridge, Massachusetts, or Cambridge, England; its Universal Laws resembled those felt to be useful by Congress and Parliament; and its Universal Truth bore English and American accents. Imperial powers, so it seems, seek to create not only economic and political clients but intellectual clients as well. And client states adopt, often for reasons of status and power, the perspectives on economics, politics, communication, even on human nature, promulgated by the dominant power. While this argument can be converted into a vulgar Marxism, that was not the tactic of Innis, as I hope to show.

Innis believed that Canada's role in the world was to be poised between the two largest modern empires, the British and American. He put forward what we would now identify as a "third world" position, although that, of course, was not precisely his intent. Canadian intellectuals, Innis felt, should use their position between the British and American empires as the starting point of their work. They should use social science and history to build a series of interpretations and "laws" that would maintain the integrity of Canadian experience and maintain its autonomous existence in the face of intellectual imperialism. Again, he did not argue this solely for reasons of cultural nationalism, although he often has been read that way. He felt that the great task of Canadian intellectuals was to correct the bias of British and American scholarship and to blunt its penetration into spheres where it had no explanatory significance. In cultural matters Niagara Falls, to again use Wilde's metaphor, did run the other way. The flow of American

intellectual and social culture into Canada was not problematic for American scholarship: it was fully justified by doctrines such as freedom of trade and freedom of information. It was radically problematic, however, for Canadian scholarship, for it threatened the existence of Canadian culture. This threat did not interest Innis solely for reasons of personal interest and national pride. He was committed to the notion of pluralistic centers of scholarship as essential to cultural stability. Variations in history and geography demanded in scholarship concomitant variation in social theory and cultural meanings. Like Patrick Geddes, the Scot biologist whom he resembles and from whom he borrowed, he believed that the search for intellectual universals could proceed only through the analysis of radical particularities of history and geography. This relationship between imperial powers and client states, whether in the sphere of economics, politics, or communications, was expressed in his work by a series of polarities with which he and other Canadians have described political and cultural relations: relations between metropole and hinterland, center and margin, capital and periphery or, in the more abstract terms he preferred, time and space.

For such reasons Innis tried to encourage a Canadian viewpoint on intellectual matters and to write out of Canadian experience. American social science cannot readily ingest scholarship written with that motive and against the backdrop of that experience. American social science rejects this transplant not solely because it is foreign; after all, Innis shared much in common with Veblen, an American outsider. It rejects Innis because the status of American social science was shifting in the very years Innis was writing, and as Innis explicitly recognized, from a prophetic to a priestly role: from an independent center of thought and influence to a thorough integration into the modern economy and state. The shift to an industrialized basis of production for knowledge signalled the ingestion of the intellectual class into the apparatus of decision and rule.

Intellectuals became a priesthood upholding the pieties of industrial meanings rather than a prophetic cabal puncturing American interests and pretension.

On the one hand, Canadian scholarship cannot adopt the American point of view without simultaneously acquiesing to American influence. On the other hand, it is only among the Left or among certain elements of what I call democratic communitarianism that Canadian scholarship of Innis' variety achieves a sympathetic reading.

But this rejection of Innis has had severe disadvantage for American scholarship. It has removed from the United States critical community the only writing on communications technology that has power, scope, theoretical integration and, unlike Marxism, relevance to the North American community.

In the balance of this essay I would like to pay homage to Innis' Canadian theory of communications not by piously repeating it, although I shall do some of that, but by gently extending it. I wish to draw out of his writings what I take to be some necessary implications of his thought. This requires some license that is more than poetic, some simplification of original texts, and some imputation to Innis of positions that are my own. I justify it only by my belief that Innis has had enough hagiography and the great need now is to extend, however tentatively, his analysis. Therefore I wish to extract two well-known polarities from his work and use them as a starting point for a series of observations. The polarities are time-binding versus space-binding communications and monopolistic versus pluralistic communications.

II

Time-binding versus Space-binding Communication. There has been rather too much metaphysical debate spent figuring out what Innis meant by the terms time and space. I at least happen to think that the basic meaning of these terms and

the implications he wished to draw from them are relatively direct and simple. He expressed the essence in a direct statement:

> In confining my comments to political organizations, I shall restrict my attention to two dimensions--on the one hand the length of time over which the organization persists and on the other hand the territorial space brought within its control. It will be obvious in the case of the second consideration that organization will be dependent to an important extent on communications in a broad sense--roads, vehicles of transmission, especially horses, postal organization and the like for carrying out orders. It will be less obvious that effective communications will be dependent on the diffusion of a knowledge of writing or in turn a knowledge of an alphabet through which orders may be disseminated among large numbers of subjects.

Societies exist in two dimensions: space and time, duration and extent, history and geography. Innis attempted to connect these polarities dialectically; he turned them into what we have learned to call, in testimony to our capacity to invent terminology, conjugant variables: the more you get of one, the less you get of the other. Attempts to insure duration limit extent; attempts to increase geography attentuate history. He recognized there was always a price to social policy however complicated the modes of payment may be in the particular life of particular people. Wisdom in social policy is the continuous attempt tosimultaneously adjust to the demands of time (stability, continuity, duration, succession) and the demands of space (geography, control, political, economic, military necessity). The ability to meet these conflicting demands is enormously complicated by the very nature of communication and communication technology. A particular complication is the inherent contradiction between the demands of long distance versus short distance communication. It can be put as a proposition: As long distance communication improves, short distance communication deteriorates. Time and space, then, are largely names for short distance and long distance communication. The dialectical relations between history and geography derive from the contradictory relations between these two forms of communication.

Now let me add a complication. Much of the confusion in Innis on the relations of time and space derives from his maddening habit of fusing together quite distinct dimensions of these two "variables." I want to argue that there is a physical, a structural and a cultural dimension to the relations of time and space or long distance and short distance communication, though the differences are ones of shading and emphasis rather than sharp demarcation.

First, the physical dimension. When Innis suggests that time and space are reciprocally related, he first of all means that demands for the physical improvement of communication over distance are related to the progressive difficulty in maintaining effective communication in proximate relations.

A major dream of ancient man was to improve communication at a distance, to overcome the inherent spatial limitation of language. Oral speech cannot traverse distance without quickly evaporating into distortion, rumor and dialect. Consequently, there always has been strict limitation on the ability of speech to exercise effective control at a distance. A major challenge to human communities has been to discover ways to transmit messages in relatively costless ways over wider distances. As an economist, Innis emphasized not merely the discovery of means of transmitting messages but their transmission in cost effective ways. The specifics of how this has been done from smoke signals to television need not detain us. What we need to observe, however, is that the price of improving long distance communication is the development of types of codes and forms of social organization that alter the physical and social relations among people. Let us call this bias of social policy--a bias emphasizing the increase of <u>speed</u> and the reduction of the <u>cost</u> of communication at a distance--a high communication policy.

A high communication policy effects short distance communication in two ways. First, the extension of language over space drains it of its capacity

to serve as an instrument for emotive meaning and emotional closeness and therefore reduces the capacity of language to be time-binding. The cost of translating language into semaphore signals or telegraphic dots is to strip away from language the expressive capacity it possess in close traditional contexts of face to face usage.* Second, the stretching of language over longer distances

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*The argument runs fugitively throughout Innis' writings. Perhaps he said it most clearly in summarizing, with approval, some views of Graham Wallas:

> He assumed that creative thought was dependent on the oral tradition and that the conditions favorable to it were gradually disappearing with the increasing mechanization of knowledge. Reading is quicker than listening and concentrated individual thought than verbal exposition and counter-exposition of arguments. The printing press and radio address the world instead of the individual. The oral dialectic is overwhelmingly significant where the subject matter is human action and feeling and it is important in the discovery of new truth but of very little value in disseminating it. The oral discussion inherently involves personal contact and a consideration for the feeling of others, and it is in sharp contrast with the cruelty of mechanized communication.... The quantitative pressure of modern knowledge has been responsible for the decay of oral dialectic and conversation. The passive reading of newspapers and newspaper placards and the small number of significant magazines and books point to the dominance of conversation by the newspaper and to the persuasive influence of discontinuity which is, of course, the characteristic of the newspaper as it is of the dictionary. Familiarity of association, which is essential to effective conversation, is present but is not accompanied by the stimulus which comes from contacts of one mind in free association with another mind following up trains of ideas." "A Critical Review," in The Bias of Communication, Toronto: University of Toronto Press, 1951, pp. 191-192.

Our understanding of the Nature and qualities of the oral tradition has been radically extended by Innis' colleague at Toronto, Eric Havelock. See: Preface to Plato, New York: Grosset & Dunlap, 1967.

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necessarily creates new relations of power and control that blunts the effective capacity of proximate relations. New communication facilities create special classes of readers, listeners, viewers, computer freaks with little prospect of communication among them.*

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*Innis, The Bias of Communication, p. 28

This is perhaps easiest seen in the case of transportation. A high communications policy was followed in the United States throughout the 19th century. It began, officially at least, with the Secretary of the Treasury Albert Gallatin's Report on Public Roads and Canals (1808) ironically enough during the administration of Jefferson. By directing social investment toward the construction of the canal, railroad and eventually the streetcar, both the effective size of the nation and of the city were increased. The radius of Boston, for example, increased through use of the railway from two miles to six miles between 1850 and 1890. This substitution of the horse-drawn streetcar and then the electric trolley for walking increased distance while it decreased freedom. Streetcars moved over iron and inflexible routes. While they increased the speed and distance over which people can travel and reduce cost, they necessarily change, as well, face to face contacts and social relations. They strengthen the relations between centers and margins while weakening everything in between. In prosaic terms, they strengthened the relation between the downtown department store and the suburb, the urban advertising based newspaper and the community. They weakened the neighborhood and village and the community network of knowledge, information and gossip. Similarly, the creation of the mail order house, through the telegraph, railway, rural free delivery and parcel post, increased the speed and distance of moving information and material while reducing the cost; it also led to the disappearance of forms of community relations organized around the post office and general store, forms which relied on traditional types of language and ritual, and substituted the more distant forms of the catalog and reproduced letter.*

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*See Daniel J. Boorstin, The Americans: The Democratic Experience, New York: Random House 1973, Part Two.

In summary, then, as we have improved and reduced the cost of long distance communication and transportation, we have hooked people into longer and more reliable physical networks, but we have also made face to face, neighborhood relations more difficult to maintain, inaccessible and, in the non-economic sense, more costly. As we have increased the freedom to travel and to be informed, we have decreased the freedom to move about under one's own power and therefore at one's own control and the freedom to speak to others of one's choosing with ease. A high communications policy, in strengthening long physical lines of transportation and communication, degraded many social relations and aspects of the cultural environment, reducedthe choice of life styles, involved huge public expenditure, increased social control and led to purely technical processes dictating social relations.

There is a second level of contradiction in the relationship between long distance and short distance communication and this is less physical than structural: as communication improves over long distances there is an attendant shift of the location of authority to more distant, diffuse and abstract centers. This shift is recognized in phrases like the "rise of public opinion," the "growth of empire," the nationalization of power, and the emergence of legal, bureaucratic authority. It can also put this as a proposition: each improvement in long distance, space-binding communication leads to a dialectic of centralization and decentralization of authority and location. Or to put it more simply, though no less correctly, improvements in communication centralize authority as they decentralize location.

When long distance communication is relatively expensive, time consuming and intermittent, authority must be delegated from centers to margins. For example, Leonard White observes that:

> [In the Federalist period] the difficulties of communication were extreme in the conduct of the business of the Department of State.... A reply to a foreign dispatch could hardly be expected within a period of three months. In such circumstances, instructions had to be general, confidence had to be complete, and the discretion of the minister had to be wide.*

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*Leonard White, The Federalists, New York: The Free Press, 1948, p. 129.

The relative slowness of communication diluted the effective, detailed regulation of control over long distances. The slowness of communication between London and colonial governors gave the governors wide discretion in the exercise of powers.

As communication improves in fidelity, increases in speed and is reduced in cost, authority need no longer be delegated from centers to margins. It can be retained by the center, discretion can be reduced among distant factors, governors and operatives, and responsibility at margins can be narrowed. Consequently, improvements in communication strengthen distant centers of authority and shift control to higher echelons of organization. To make the argument contemporary there is no better observer than Gilbert Burck:

> ...just as the cable and wireless once brought farflung and quasi-autonomous ambassadors and proconsuls under home-office control, so the computer is now radically altering the balance of advantage between centralization and decentralization. It organizes and processes information so swiftly that computerized information systems enable top management to know everything important that happens as soon as it happens in the largest and most dispersed organizations.

Burck concluded that computers and automation have "generated what appears to be nothing less than a pervasive recentralization.".*

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*Gilbert Burck, The Computer Age and Its Potential for Management, New York: Harper and Tow, 1965, pp. 102-103

This relationship between the structure of authority and communication can be illustrated through some details of American history and of the growth of modern nationalism. With the rise of printing and the vernacular modern nations grew through the centralization of power. Strong English rulers organized a central administration and used itinerant, literate judges to establish a "common law." Simultaneously parliament drew decisions to the physical and political center. The modern nation grew through the centripetal forces inherent in print and the vernacular.*

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*See Daniel Boorstin, The Americans: The National Experience, New York Random House, 1962, pp. 393ff.

As the modern nation centralized its authority, it also decentralized, through empire, its location. Print in conjection with new forms of transportation reduced signalling time: the time necessary to send reliable messages as a function of cost and distance. This allowed for the fixing of responsibility and accountability over vast distances. The period of North American colonization is an example. In North America problems quickly arose, for nations tended to quickly outrun the existing capacity of print and transportation. As Daniel Boorstin has argued:

> Communities in America had interests more unpredictable and more diverse than those of even the most remote English counties. Obviously, it was wise that their government should be coordinated with that of the rest of Britain, yet their remoteness and the irregularity of communication made central control difficult or impossible. Even the most prudent, flexible, far sighted British administrators could not adapt their programs to colonial conditions if they did not know these conditions or if their information, at best, was months out of date. Of the many circumstances which led to the diffusion of governmental powers and responsibilities

into the different colonial centers, none was more important than the lack of communications.

Ibid., pp. 393-394.

Communication improved after the middle of the 18th century, but by then it was too late. The weakness of long distance communication allowed a working federalism to spring up in the colonies. After independence the same barriers to long distance communication, barriers of time, geography, and cost, limited the power of nationalism both on the seaboard and more dramatically in the American West. Until the telegraph a structure of loyalties and authority developed that was to the community, the state or territory and to a working federalism and not to the nation, the United States.

The limitations of print have long since been removed. With instantaneous electronic communication, authority need not be delegated to colonial governors, regional offices, independent factors, sales agents or commanding generals. Power and authority can be maintained at the center. Distant military fronts can be run over the telephone, the diplomatic service can be effectively disbanded and diplomacy run directly from the home office by peripatetic foreign secretaries and telex, delegated authority removed from local government and recentralized. As the authority of long distance communication improves, the authority of the local community evaporates.

It was however the third dimension of time and space, the cultural dimension, that in some ways most interested Innis, and on which his own writing is most opaque. Changes in communication affect not only the physical relations among people and the centralization or decentralization of authority but also, and perhaps most importantly, the structure of consciousness, or to avoid that somewhat

overworked word for the moment, the structures of thought. Here we encounter a complication that derives less from Innis than from a prejudice present in the way we are accustomed to think about thought. In our predominantly individualistic tradition we have normally characterized thought as being essentially private, a sequence of ghostly happenings in the head, graphically represented by Rodin's "The Thinker." However, there is little evidence to support such a private view of thought. Thought is predominantly public and social. It occurs on blackboards, in rituals and poetic readings. The capacity of private thought is a derived, secondary talent, one that appears biographically later in the person and historically later in the species. To reduce it to a catch phrase, we learn to count on our fingers before we learn to count in our heads. Fingers can be "things to think with," representations of numbers, but so can sounds in the air, lines on a paper or even, as the work of Levi-Strauss has taught us, natural objects like animals and plants. These things of the world can become things of the head when they are disengaged from the natural backdrop and made to serve as vehicles for carrying a meaning. Thought is primarily public then because it depends upon a publicly available stock of what we have learned to call significant symbols. It is public in a second and stronger sense: thinking consists of building maps of environments. Thought involves constructing a model of an environment and then running the model faster than the environment to see if nature can be coerced to perform as the model does. Thought is the public construction and public utilization of maps, models, templates: football plays diagrammed on a blackboard, equations on a paper, ritual dances charting the nature of ancestors or streams of prose like this attempting out in the bright lit world in which we all live to model the effect of communication technology.*

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*I have treated these matters at greater length in my essay "A

Cultural Approach to Communications," Communications, Vol. 1, No. 3, in press. Also see Clifford Geertz, The Interpretation of Cultures, New York: Basic Books, 1973.

It was then a final implication of Innis' thought, though not one he ever directly expressed, that culture should be seen not as learned behavior or mores and customes but as forms of thought: models constructed out of symbols--danced as ritual, drawn as equations, incanted as prayers--that serve to contain and guide human action. Culture is, in Ernst Cassirer's apt phrase, the place of the mind in nature and to study culture is to study the constructions men place upon their experience. The question for Innis then was how do changes in forms of communication change the constructions men place on experience, the nature of their thought, or, to return to our more inclusive term, the structure of consciousness?

Innis argued that changes in communications technology affected culture by altering the structure of interests (the things thought about), by changing the character of symbols (the things thought with) and by changing the nature of community (the arena in which thought developed). By a space-binding culture he meant literally that: a culture whose predominant interest was in space--land as real estate, voyage, discovery, movement, expansion, empire, control. In the realm of symbols he meant the growth of symbols and conceptions that supported these interests: the physics of space, the arts of navigation and civil engineering, the price system, the mathematics of tax collectors and bureaucracies, the entire realm of physical science and the system of affectless, rational symbols which facilitated those interests. In the realm of communities he meant communities of space: communities that were not in place but in space, mobile, connected over vast distances by appropriate symbols, forms and interests.

To space-binding cultures he opposed time-binding cultures: cultures with interests in time--history, continuity, permanence, contraction: whose symbols were fiduciary--oral, mythopoetic, religious, ritualistic, and whose communities were rooted in place--intimate ties and a shared historical culture. The genius of social policy, he thought, was to serve both the demands of both time and space; to use one to prevent the excesses of the other: to use historicism to check the dreams of reason and to use reason to control the passions of memory. But these were reciprocally related tendencies. As cultures became more time-binding they became less space-binding and vice versa. The problem again was found in dominant media of communication. Space-binding media were light and portable and permitted extension in space; time-binding media were heavy and durable or like the oral tradition persistent and difficult to destroy.*

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*The best compact statement of this view of the oral tradition is perhaps found in The Bias of Communication, p. 105. But also see Eric Havelock, Preface to Plato; Walter Ong, The Presence of the Word, New Haven: Yale University Press, 1967; and J. A. Goody, ed., Literacy in Traditional Societies, Cambridge: Cambridge University Press, 1968.

In propositional form, structures of consciousness parallel structures of communications.

Daniel Boorstin, in an apt phrase, recently described city newspapers, particularly those published during the period of urban expansion in the 19th century, as "the streetcars of the mind." The linkage of transportation and communication, albeit metaphorically, is appropriate: for as the streetcars stretched the city in space and broke the association between work and residence, the newspaper, particularly newspaper advertising, pulled the imagination "downtown" and in the process broke the linkage between residence and shopping. In creating communities on the move, on the move physically as well as imaginatively,

the newspaper and the trolley car shattered the boundaries and reality of the neighborhood community and substituted for it abstract and mobile communities: communities of shoppers and commuters. Where people travel--vicariously or physically--influences the content of culture. Thus, space-binding forms of communication set up voyages--physical, imaginative, metaphysical--into new realms of space and possibility. Whatever else print or any other forms of communication might be used for, their primary effect is to redraw the geography of culture: to shatter the verbal resources of linguistic communication, mythic participation and shared ritual and to substitute rational legal forms of intellection and imaginative voyages in space. As we once defined Utopias as existing someplace else in time--literally no place--we came to define them as existing somewhere else in space and the vehicles of trancendence were those of communication and transportation. More prosaically, print burst the bounds of local interests and imagination and of the local community with its particular verbal resources in the name of a more global, spatially defined community.

But print also created new forms of cultural association. The form of cultural association related to time- and space-binding media is perhaps best expressed as the introduction of a horizontal dimension into modern states and into international relations as well and as an alteration in the meaning and relations of social classes. Charles Beard selected 1896 as the pivotal year in modern American history because the political conventions of that year introduced horizontal cleavages into society that were overlaid on existing vertical ones. Let me quote him directly:

> Deep underlying class feeling found its expression in the conventions of both parties and particularly that of the Democrats, and forced upon the attention of the country in a dramatic manner a conflict between great wealth and the lower middle and working classes which had hitherto been recognized only in obscure circles. The sectional or vertical cleavage in American politics was definitely cut by new lines running horizontally through society.*

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*Charles A. Beard, Contemporary American History, New York: McMillan, 1914, p. 164.

It is not accidental that Beard chose the period in which a national communication system, through the agency of the news service and the national magazine as well as rural free delivery and the mail order house, was emerging to mark this new historical phase. He is implicitly contrasting horizontal forms of association with local and regional communities. These latter communities, naturally, possessed a class structure but such structures revealed class variations on a common culture: vertical divisions within communities and not horizontal units across them. Improvements in long distance communication created a series of national classes, first in business but eventually spreading out into every domain of human activity. These national, horizontal units of organization created by space binding forms of communication possessed greater reality in terms of culture and power than the local units from which they sprang. The upshot of the Progressive Movement, of which Beard himself was a part, was not, in the phrase of John Dewey, the transformation of a great society into a great community, but the creation of innumerable horizontal communities tied together across space, attenuated in time, and existing relative to one another not as variants on an explicitly shared culture but, in David Riesman's apt term, as "veto groups," Moreover, there was little relation among these horizontal layers except the exercise of power and manipulation.

Beard states, then, the final relation Innis was setting forth between time and space and between long and short distance communication. If communication is physically effective over short distances and weak and attenuated over long, we would expect that the units of culture, politics and common concern that would emerge would be grounded in place, in region, in local communities. While these

communities would be vertically stratified it would still be sensible to speak of a shared culture and politics among them. Small deviations in space would produce great differences in culture and interests. Larger units of social organization that emerged would not be national but federal: amalgamations of local structures into more comprehensive communities. However, as long distance communication improves, both local and federal relations evaporate into a stratified national community. Large numbers of people physically and culturally separated become effective national communities of culture and politics. As long distance communication improves and short distance deteriorates we would expect that human relationships would shift to a horizontal dimension: large numbers of people physically separated in space but tied to a common culture by participation in extra-local centers of culture, politics and power.*

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*The best exposition of this interpretation of the progressive era and the growth of national organization and communication is found in Robert Wiebe. The Search for Order, 1873-1920, New York: Hill and Wang, 1967.

In common observation we attest to this shift in many ways: in our recognition of the growth of "worlds" of fashion, sport, and leisure; the emergence of international classes of bankers, athletes, scholars divorced from the culture of local, regional, and, increasingly in this age of rapid international communication, national clients; the decline of regional and local university traditions and the growth of national and international schools. Paradoxically, again, as national and international improvements in communication occurred they reduced effective local and short run communication by making the relations between horizontal classes more problematic and generational relations more quixotic and unstable.*

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*I have treated the relations of generations in my essay "Harold Adams Innis and Marshall McLuhan," p. 29-34 and in "Generations and American

Society," America Now, John G. Kirk, ed. New York: Atheneum, 1968, pp. 293-305

In summary, as communication improves over long distance the effective units of culture and social organization undergo a change in scale. There is a progressive shift from local and regional units to national and international ones. This extends the horizontal divisions in social organization over wider geography and further attenuates vertical relations. Individuals are linked into larger units of social organization without the necessity of appealing to them through local and proximate structures. Communication within these local units becomes less critical for the operation of the society and less relevant to the solutions of personal problems and the maintenance of individual self-esteem. Finally, the growth of long distance communication not only alters the communities in which thought develops and occurs but the things thought about--speed, space, movement, change, mobility--and the things thought with--rational, mathematical, legal, analytic symbols.

It is this triple relationship between long distance and short distance communication that Innis collapsed into one relationship, namely, the relation of space and time.

III

Monopolistic versus Pluralistic Communication. While traditional liberal values can be found sprinkled throughout Innis' Canadian theory of communication, it is of some surprise that he saved some of his most savage language for assaults on the Anglo-American notion of freedom of the press. He argued that the first amendment to the United States constitution did not so much grant freedom of speech and press as it gave constitutional protection to technology and in this sense restricted rather than expanded freedom. The clause served largely to consolidate

the position of the newspaper's monopoly of knowledge and eventually, through the paper's dependence on advertising and news, was instrumental in telescoping time into a one-day world, in spreading the values of commercialism and industrialism and furthering the spatial bias of print. In granting freedom of the press, the constitution sacrificed, despite the qualifying clause, the right of people to speak to one another and to inform themselves. For such rights the constitution substituted the more abstract right to be spoken to and to be informed by others, especially by specialist, professional classes. He refused to yield to the modern notion that the level of democratic process correlates with the amount of capital invested in communication, capital which can do our knowing for us, and fervently hoped that his work would break modern monopolies of knowledge in communication and restore faith in the political power of the foot and the tongue.*

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*See "Industrialism and Cultural Values" and "Technology and Public Opinion in the United States" in The Bias of Communication, but the argument appears in almost all of Innis' later writings.

Innis' notion of a monopoly of knowledge is the one concept in his writings that has diffused widely and is now part of the analytic apparatus of many social theorists. And yet, like so many of his ideas, it is Janus headed, pointing simultaneously in so many different directions that it is hard to track them down and hold them together. He derived the notion of a monopoly of knowledge, on the one hand, from a straightforward application of the theory of economic monopoly to cultural affairs and, on the other, as is perhaps intuitively evident, from his analysis of the relations of space and time.

He argued that any form of communication possessed a bias; by its nature it was most adept at reducing signalling time and controlling space or strengthening collective memory and consciousness and controlling time. This

bias hardened into a monopoly when groups came to control the form of communication and to identify their interests, priestly or political, with its capacity.

In economic terms monopoly simply means the control of supply by a single source. If knowledge is viewed as a commodity, as something that can be possessed and distributed, then it too can be monopolized: the sources of knowledge or skill or expertise can be reduced to one. Obviously, for monopolies of knowledge to grow, some division of labor must be present, for, as with other commodities, monopolies can grow only when persons are dependent upon an external source of supply. When people are capable, through control of knowledge and resources, of producing goods for themselves, monopolies are inhibited. In Innis' view, commercialism was a system that ultimately transferred all control from the person and community to the price system:* where people are fed every product, including

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*See "The Penetrative Powers of the Price System," Essays in Canadian Economic History, pp. 252-272.

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knowledge, by a machine which they merely tend.

The strength of the oral tradition, in Innis' view, derived from the fact that it could not be easily monopolized. Speech is a natural capacity, and when knowledge grows out of the resources of speech and dialogue, it is not so much possessed as active in community life, a view Innis shared with John Dewey. But once advanced forms of communication are created--writing, mathematics, printing, photography--a more complicated division of labor is created and it becomes appropriate to speak of producers and consumers of knowledge. Through the division of labor and advanced communications technology, knowledge is removed from everyday contexts of banquet table and public square, workplace and courtyard, and is located in special institutions and classes. In extreme form we come to speak of a knowledge industry, and meanings are not dignified as knowledge until they are

processed through that industry or certified by designated or self-designating occupations, classes, organizations, or even countries.

As in his analysis of space and time, Innis' writings about monopolies of knowledge continually moved across three dimensions of the phenomenon. There is a physical, structural and cultural aspect to a monopoly of knowledge, although again they are but slight variants on the same theme.

Physically a monopoly of knowledge is created when information can be made to move at unequal rates of speed so that what is the past for one party is still the future for another. This can be called the "bookies' dilemma." What bookies fear most is someone placing a bet after the race has been won and the winner declared. Bookies seek therefore to get information from the track faster than the bettors lest the bookies' future be the bettors' past. It was no accident that one of the first major uses of the telegraph for public communication was in gambling, nor was it accidental that Chicago became the center of gambling as it was the center of the railroad and telegraph. Mont Tennes, the Chicago gambling czar prior to World War I, established a chain of gambling parlors, organized telegraphic services to bring in race results from tracks throughout the country, and later organized a nationwide General News Service to bring more reliable information from the race track.*

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*Boorstin, The Americans: The Democratic Experience, p. 79

The context of a physical monopoly of knowledge need not be limited to the exotic sphere of gambling. Whenever information, in fact or in belief, moves at unequal rates of speed, what is already the future for the privileged is still the past for the deprived. For example, there is the often told story of the Rothschilds cornering the market on the London stock exchange by the

simple device of having a high speed private communication system relay messages across the English channel on the progress of the Battle of Waterloo. By knowing in advance news of military victory and defeat, Nathan Rothchild could anticipate the market.* But the capacity or presumption to knowledge of the future is a

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* V. Cowles, The Rothchilds: Family of Fortune, Knopf, 1973

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general phenomenon. It is found in shamans and witchdoctors, priesthoods predicting through elementary astronomy the floodtide of the Nile, or prophets hearing voices. Control of the speed of communication, in fact or fancy, is one of principal points of competition in communications.

Being strategically located in a high speed channel of communication delivers a great comparative advantage relative to others at some other point in the same channel or outside the channel altogether. Moreover, there is a cost element in this as well. The cost of communication is a large part of the cost of engaging in any activity. By being able to reduce the cost of communication greater flexibility of action can be gained.

Writing in 1932 Arthur W. Page felt that physical monopolies of communication were possible solely because of the dependency of writing, speech, and print on transportation for distribution. As an apologist for electronic communication, he felt the telegraph, radio and ultimately television would be democratic forms of communication because they would eliminate the result that the race goes to the swiftest.* Yet he also overlooked the degree to which many American

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*Arthur Page, "Social Aspects of Communication Development," Modern Communication, Arthur Page, et. al. (eds.), Boston: Houghton Mifflin Company, 1932 pp. 18ff.

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businesses in the 19th century sprang out of telegraph offices (Richard B. Sears in North Redwood, Minnesota, is only the most vivid example) because of the critical location of the operator in a rapid system of information transmittal. Page also overlooks the critical comparative advantage available to those who can reduce the cost of telephone, either because they have free access to long lines (telephone company employees running side businesses, for example) or can through WATS lines reduce unit costs or who reside at modern points where information flows: airports and computer terminals, for example.

The structural dimension of the monopoly of knowledge is related to centralization and decentralization. The basic argument for the centralization of function and activity is the economics of scale. It is generally assumed that the cost of operation declines and the efficiency of operation increases as the scale of organization is enlarged. While it is recognized that there are diseconomies of scale that can be encountered at relatively low levels of organization and that any organization passes at some point into a phase of "diminishing returns," in the actual world these diseconomies never seem to be encountered. However, if the cost of communication is controlled, the size of organization has little to do with efficiency and cost effectiveness. The centralization of organization is justified more by inequalities of knowledge than by the advantage of cost and efficiency.

When lines of communication are long and slow, there is a dependence of the center of organization on its decentralized margins. Not only is activity decentralized but authority as well. Knowledge is possessed at the margin that is not available at the center. Therefore, as previously argued, freedom of judgment and action must be delegated to the margin. Information available at the center is not current, and the ability to respond quickly to shifting conditions and opportunities is absent. A general mutual dependence exists and on equality of knowledge as well. Perhaps the same things are not known at the center

and margin, but things are known at each point denied to the other. For example, in the 19th-century system of distributing goods in the United States, Eastern manufacturers depended on a system of distribution they could not readily control. While the distributors depended on the manufacturers for goods, manufacturers in turn depended on distributors for knowledge of markets, opportunities for products, and information about taste, styling, and packaging. This has sometimes been described as a gravity feed system of marketing because once a product was manufactured its subsequent fate was in the hands of distributors. From a cost and efficiency standpoint, there is not much wrong with such a system, but the knowledge possessed by the distributors effectively curtailed the power of the manufacturer. With improvements in communication, manufacturers were no longer obligated to delegate authority. The authority of the middleman was shattered, and he was degraded to the status of a hired hand following orders from the home office. Through high speed communication, someone in New York could know as much about the Midwest as someone on the scene. The systematic collection and storage of information in the home office reduced dependency on the field workers. As importantly, national advertising allowed the manufacturer to leapfrog over the distributor, create demand for a specific brand, and in effect suction goods through the distribution channel.

This homely example illustrates a number of points. In any system of communication there are critical positions at which information is stored. These structural positions are capable of monopolizing knowledge of given situations and power consequently accrues to them. One of the motives behind the search for ways for altering communication technology is the desire to break these monopoly positions. Physically the effect of improving communication is to maintain the decentralization of location and activity and to centralize the location of authority. Structurally the effect of improvements in communication

is to decentralize work and to centralize knowledge. The centralized control of communication creates a condition of inequity and dependency.

Structural monopolies of knowledge refer then not to the movement of information but to its storage. The appropriate questions are these: is knowledge in any form of organization widely distributed or narrowly controlled? Is it centralized in home offices, secrecy files, libraries, computer facilities or limited to few, the terms of decision sequestered among elites or available to large numbers?

The effect of improvements in communication has been to enhance secrecy and mystification, to centralize and monopolize knowledge in national professions, data banks and home offices. But the effects are even more dramatic in the public media of communication.

Innis argued that the effect of modern advances in communication was to enlarge the range of reception while narrowing the points of distribution. Large numbers are spoken to but are precluded from vigorous and vital discussion. Indeed audiences are not even understood. Professional classes appropriate the right to provide official versions of human thought, to pronounce on the meanings present in the heads and lives of anonymous peoples. In Changing Concepts of Time he commented that vast "monopolies of communication occupying entrenched positions involved a continuous, systematic, ruthless destruction of elements of permanence essential to cultural activity." He is claiming something more than the now commonplace observation that over time the media of communication become increasingly centralized and conglomerate. He is not merely claiming that with the growth of the mass media and the professionalization of communication a few journalists, for example, achieve vast readership while other people are reduced to representation in the letters to the editor. He is claiming that the commodity called "information" and the commodity called "enter-

tainment" and the knowledge necessary to produce these things of the world becomes increasingly centralized in certain elites and institutions. The civic landscape becomes increasingly divided into knowledgeable elites and ignorant masses. The very existence of a commodity such as "information" and an institution called "media" make each other necessary. More people spend more time dependent on the journalist, the publisher, and the program director. Every week they wait for Time.

The new media centralize and monopolize civic knowledge and as importantly the techniques of knowing. People become "consumers" of communication as they become consumers of everything else, and as consumers they stand dependent on centralized sources of supply.

The development then of monopolistic or, if that is too strong, oligopolistic structures of knowledge and knowing and the professional classes that control them expropriates the more widespread, decentralized body of human impulses, skills, and knowledge on which a civil society depends. Given a network of such monopolies backed by corporate economic and political power we reach a stage under the impulse of advanced communication where there is simultaneously advancing knowledge and declining knowing. We keep waiting to be informed, to be educated, but lose the capacity to produce knowledge for ourselves in decentralized communities of understanding. All this apparatus generates continuous change and obsolescence: time is destroyed, the right to tradition is lost. The more complicated the tools of communication the easier for it to be anonymously owned and controlled and for knowledge to be centrally stored.

It has been the fervent hope of many that the advent of electronic communication and in particular computer technology and information utilities would end structural monopolies of knowledge. Ithiel de Sola Pool, for example,

recently wrote:

> The information facilities provided by the computer can...serve as a decentralizing instrument. They can make available to all parts of an organization the kinds of immediate and complete information that is today available only at the center. The power of top leadership today is very largely the power of their information monopoly. Only they are served by the army of clerks that compile the records of what is going on. A society with computerized information facilities can make its choice between centralization and decentralization because it will have the mechanical capability of moving information either way. An information utility can make information available with unprecedented facility to people working at all levels.*

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*Ithiel de Sola Pool, Stuart McIntosh, and David Griffel, "Information Systems and Social Knowledge," Information Technology in a Democracy, Alan F. Westin, ed., Cambridge: Harvard University Press, 1971, p. 248.

Similarly Edwin Parker holds out the same hope in education. He asks:

> What will happen when the student's access to information is just as good as his teacher's? What will happen where there are some bright youths who have access to this communication scheme--who look into the encyclopedia and into the communication system? I suspect that some of our youths will keep us older men running when their information sources are as good as ours.

While Pool and Parker see computer communications technology democratizing economic and educational life respectively, Harold Sackman sees the same technology democratizing our civic life:

> The way out of the dilemma of overconcentration of information power in some new elite is modification of existing democratic procedures with the aid of new technological capability. Pluralistic checks and balances between competing groups and interests, conducted in an open forum, is a time-honored method for preserving a dynamic democratic equilibrium. The design of pluralistic checks and

> balances for diverse real time information systems and public information services would be pouring new real time wine into old democratic bottles. The new real time information services can be applied to enable the public to exert closer scrutiny over elected officials by more frequent voting and more frequent expression of public opinion by electronic polling on key issues as they arise.*

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*Harold Sackman, "A Public Philosophy for Real Time Information Systems," Information Technology in a Democracy, Westin, ed., p. 228.

Based on the work of Innis there is ample reason to suspect that computer communications facilities will not break the structural monopoly of knowledge of the professions and public media. But even if Pool and Parker and Sackman are right concerning the democratization of access to stored knowledge, they still are ignoring the cultural dimension of monopolies of knowledge and it was on this matter that Innis was most incisive.

When Innis spoke of monopolies of knowledge, his examples were often directed at problems that were physical and structural: speed of movement and access to stored information. But he also used the term in a stronger sense. He believed that the fundamental form of social power is the power to define what reality is. Monopolies of knowledge then in the cultural sense refer to the efforts of groups to determine the entire world view of a people: to produce, in other words, an official view of reality which can constrain and control human action.

Therefore, when Innis spoke of the monopoly of knowledge of the medieval church, he was not simply talking of the capacity of the church to predict the future, through prophets and astrologers, or to store in monasteries the official knowledge of human experience. Rather he was referring to the power of the church to produce, through the control of speech and ritual and art, an entire

system of thought, an official view of reality. The church produced what we would now call a paradigm: a view of the world that predetermined what it was that could be factual, that determined what the standards were for assessing the truth of any elucidation of facts, that defined what it was that could even be counted as knowledge. And it is the capacity to predetermine the facts that constitutes a cultural monopoly of knowledge.

Modern computer enthusiasts like Pool may be willing to share their data with anyone. What they are not willing to give up so readily is the entire technocratic world view that determines what it is that qualifies as a valuable fact. What they wish to monopolize is not the data but the approved, certified, authorized mode of thought, indeed the very definition of what it means to be reasonable.*

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*I have pursued these issues in conjunction with John J. Quirk in "The History of the Future," Gerbner et al., eds., Communication Technology and Social Policy, pp. 485-503

What Innis recognized, of course, is that knowledge is not simply information. Knowledge is not given in experience as data. There is no such thing as information about the world devoid of conceptual systems that create and define the world in the act of discovering it. And what he warned against was the monopoly of these conceptual systems or paradigms. Even in the realm of science he warned against them. He recognized that the intellectual life tended toward monopoly positions: schools would grow up around a Freud or Keynes or around a paradigm like behaviorism that effectively monopolized a department or university or culture and cut off communication. He recognized that organizing science paradigmatically heightened efficiency: the closure of perspective increased the speed of accumulation. But it also sapped the vitality of intellectual work, decreased its sense of time and history, and threatened

in the long run the stability of scientific enterprise.

Cultural monopolies of knowledge then are found in the interrelationship between a form of communication and the world view articulated through it. Innis would conclude, I think, that modern information systems have not diminished the danger of this form of monopoly. Paradigms are present in the very structure of the technology of such systems: they are meta-informational, contained in computer programs, statistical routines, information storage and retrieval codes, technical theories that pre-define information and perhaps most importantly in systems of binary opposition which computer technology has made the lingua franca of modern science. Innis' greatest contribution to modern social science, I believe, was his recognition of monopolies of knowledge, his perception of the different levels at which they operate and his connection of them to forms of communication.

IV

Presenting the arguments of Harold Innis as a series of propositions with examples can easily lead to a distortion of the intention of his work, a distortion I hope to guard against in this concluding section. It is all too easy to forget that Innis was a historian. The truths he was after were historical ones, not logical or propositional ones. The order of history he was seeking was the history of order, in Eric Vogelin's useful phrase, and not the order of logic. In his writing Innis linked together events in history, often events widely separated in space and time, and he rarely, if ever, presented straightforward narrative or summaries of logically implicated propositions. He did not present a deductive argument whose conclusions could be overlaid on all sorts of events thereby automatically yielding explanations. He presented no more than a series of tendencies he saw in history, a set of values with which to make judgments, and a set of concepts to provide a beginning for analysis.

With his analysis you cannot predict what will happen when new forms of communication are innovated, how precisely they will bias space or time, or what monopolies of knowledge will be created. History was too open a system for that, too full of surprises, contradictions and antimonies. There are but few things that one can say prior to actually examining the historical record. Innis did assume that the growth of new forms of communication would produce profound disturbances in the order of knowledge and society. One cannot predict, given the abstract qualities of the technology, just what these disturbances will be. New forms of communication will lead to new patterns of association or community and such communities will create distinctive forms of knowledge and values. There is further a tendency for groups to impose their forms of knowledge and association on all of society creating rigid monopolies of knowing and feeling. Innis was here merely restating the Marxist proposition that the specific conditions the middle class required for its own salvation were transformed into the general conditions of salvation for all mankind, though he was generalizing its implication beyond the middle class. Each form of communication and monopoly attendant to it would bias social organization toward one of the two polarities of thought, feeling, and organization: time or space. Again, the precise form and type this bias takes is unpredictable; one need only think of his erratic and confusing remarks regarding radio. Finally, these conditions of control, bias and monopoly would encourage groups to search for new forms of communication--technologies, types of speech and symbolism, forms of social relations--in order to shatter the control and rigidity of social order. These groups would usually arise at the margins of organization where communication was weakest and least effective but there is no predicting the form or nature or composition of such groups. His propositions then are merely guides to historical research and not

laws to be mechanically applied.

The same argument can be made concerning his values. The values you find in Innis are not unambiguous moral markers to be applied to life and scholarship. It was clear that he had a bias toward time but this did not prevent him from casting severe disapproval at the temporal monopoly of the medieval church. He realized that as the Roman Empire lost its spatial monopoly upon the barbarian invasions it was "natural" for the church to build up a monopoly over time: to rely upon parchment, a limited body of scriptural writing, elaborate ritual, monasticism and celibacy, Gothic architecture and the supremacy of the Papacy to control the human imagination in time once it was no longer possible to control an empire in space. Yet he was as caustic concerning this monopoly, as he was to be of the later monopoly of print. Similarly, he held a bias toward the oral tradition, but this was because he felt, like Graham Wallas, that the oral tradition had been almost completely driven out by mechanical mass communication--the reading of books, newspapers and magazines, listening to radio, watching films. But he did not fail to note as well the binding, constraining power of custom in oral socieities lacking a literate tradition.*

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*The Bias of Communication, p. 4

Innis' strategy was always to oppose convention and conventional thinking, to attempt to restore balance to civilization by noting which elements necessary to a human culture were being eroded by a given technology.

He looked upon the university's contribution to culture as that of the permanent and loyal opposition--always moving against the grain of society, maintaining values currently scorned, bringing balance and proportion into students' thought by emphasizing the unfashionable. He was particularly dour

in his later years, for he saw the university abandon this role and saw no other institution arising to assume it. He characterized modern professors rather savagely "as hot gospellers of truth" producing "in the name of science new monopolies to exploit faith and credibility." The disciplines of the university were infected thoroughly by the bias of space. Economics, political science, urban planning, sociology and the physical sciences charted the problems, challenges, progress of society in space. Even time was converted to space as the social sciences, enamored by prediction, characterized the future as a frontier to be conquered. Even history had caught the bug for historical writing, merely used time as a container to tell the narrative of progress: politics, power, empire and rule. The only exceptions were pre-history and the grand syntheses of people like Toynbee, who, forced to rely on sources other than the written work, discovered the more physical and durable human artifacts expressive of art, mythology, ritual and enduring temporal concerns like death. His own strategy was to break chronology and try to make time a variable in history: to chart man's changing conceptions of what time was under the influence of mathematics, calendars, astronomy, religion and ritual. He tried to cut against the concerns of historiography by restoring a concern with time to the center of scholarship and thought.

Precisely how he did this is beyond us here, but allow me in conclusion to shift his argument into a more natural, narrative mode and to make, as well, a note or two on his methods.

Innis' first major work was his doctoral dissertation, a history of the Canadian Pacific railroad. While studying the path of the railroad he discovered that it largely overlaid the routes of the old fur trade and this led him to an interest in the economic staples--fish, furs, timber, pulp--that had been the basis of the Canadian economy. The discovery of the path of the fur trade led

him to examine the competiton of New France and New England for control of the North American continent. Subsequently, in his greatest work, The Fur Trade in Canada, he argued against looking at history in terms of the then prevailing paradigms: the formal stages of German history or the American "frontier hypothesis." He contended, in particular opposition to the "Turner school," that the settlement and development of Canada and the United States was largely an extension into the New World of the power and politics of Europe, particularly Spain, England and France. He described North America by three broad bands: the Canadian North, defined by the Laurentian shield and the routes of the fur trade connecting New France and Europe by the coin of commerce; the American South, tied by staples like tobacco and cotton to England; and between the two the mixed economy of the American North. The continent as a whole represented the adaptation of European culture to new geography. The patterns of trade, of institution were not a pure response to indigenous factors but rather were controlled even into the 19th century by policies of London, Madrid, and Paris. Moreover, the factors central to North American development were not such ethereal matters as frontier individualism but the rather harder facts of the biology of beavers, the role of staples in international trade and community settlement, and the persistence of unused capacity over the trade routes which acted as constant stimulus to immigration. Innis also paid considerable attention to the differing social and economic motives of the imperial powers, motives which drove the French to the Rockies when the English were still at the Piedmont, and of the fatefulness of the contact between the tribal and oral cultures of the Indians with the literate culture of Europe, a contact which shattered Indian culture as they became dependent upon European goods and integrated into the European price system. The Fur Trade of Canada is less a portrait, then, of North American

particularism than of europeanization of North America as an outpost of the first modern empires.

From his studies of the fur trade came the germ of two ideas that were later to control his studies of communication and his analysis of the relations of space and time. The first idea can be put as a question: What facilitated the great migration of European power, people and culture beyond the perimeter of Europe into a "new world"? The second idea was an implication of the staple theory outlined in that book but developed later: communication, when considered in terms of the medium that facilitated it, might be seen as the basic staple in the growth of empire.

First, the question of European migration. The expansion of Europe into North America was based on a cluster of inventions in shipbuilding, navigation and warfare. These inventions affected individual nations quite differently. However, the central impulse in each country was improvements in communications: high speed sailing craft, reliable instruments of navigation and, most importantly, printing.

As the first uses of writing were in matters of empire, warfare and the state--assessing and collecting taxes, keeping records, dispatching military couriers, counting slaves, the bookkeeping of live stock captured, casualties and confiscation--so too the first uses of printing were in the administration of nation and empire. We have come to think of writing and printing as elevated arts identified with holy books and literary art, but their immediate utilities were in the practical realm.

In the absence of printing, sporadic forays utilizing the new technology would have been attempted. However, printing encouraged the coordinated and systematic expansion of European empires, because of the structural relations between long distance and short distance communication. First, it encouraged

the centralization of national authority through a uniform code of law, a standardized vernacular, a uniform educational system, and a centralized administration capable of integrating separate provinces, regions and principalities. Second, it permitted the decentralization of national administration through the portability and reproducibility of a lightweight yet durable form of communication. National companies of trade, exploration and settlement could be created such as the Hudson's Bay Company, the company of One Hundred Associates, the Jamestown Bay Company that could be directed and, to a degree, monitored and controlled through the marriage of print and relatively rapid navigation. It was print and navigation that allowed European nations to burst the bonds of geography and spread into a "new world."

While print permitted this imperial expansion, even encouraged it, print, as the colonial powers soon discovered, also had its limitations. The French empire stretched from the maritimes to New Orleans, was thinly settled, and held together only by military strength. The weakness of communication in the American colonies permitted an effective federalism to develop despite British efforts to counter it. It was not until the 19th century with the decrease in time of Atlantic crossing and the growth of an effective mail service that control of the American colonies was possible from London but by then history had turned a corner.

If Innis was led to study communication originally by the contact of the tribal and oral cultures of the Indians with literate European cultures and by the role of print in facilitating imperial expansion, he was led to move communication to the center of his studies when he expanded his analysis of Canadian staples into wood pulp and paper. Here he made a significant discovery, albeit not quite a serendipitous one, for it is foreshadowed clearly in his earlier work. With the rapid expansion of the American newspaper

industry following the invention of the "penny press," American demand for Canadian pulp and paper was intensified. The rapid growth of the American economy pressed the United States into an increasingly worldwide search for raw materials. Canada by the conspiracy of geography and the history of European empire was cast as a staple economy providing such raw materials to England and the United States.*

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*The Bias of Communication, p. 186.

Consequently, many of the decisions central to Canadian development were made in London, New York and Washington, increasingly in this century in the United States. To support its imports, the United States exported capital, commodities and, increasingly, culture. In his studies of paper Innis discovered the true Canadian double bind. The United States imported the raw material of printing from Canada under the doctrine of freedom of trade, a doctrine of Manchester economics which the United States selectively adapted to its interests. It then exported back into Canada the finished produce fashioned from Canadian raw materials; newspapers, books, magazines and above all advertising and defended its exports with the doctrine of freedom of information. Here was the Canadian dilemma: caught between the scissors of American demand for paper and American supplies of newspapers, magazines and books, its independent existence in North America was threatened.

It was this realization that turned Innis to the study of the relations of time and space, to the relationship between the routes of trade and routes of culture. He initially characterized the history of the modern West as the history of a bias of communication and a monopoly of knowledge founded on print. In one of his most quoted statements Innis characterized modern Western

history as beginning with temporal organization and ending with spatial organization. It is the history of the evaporation of an oral and manuscript tradition and the concerns of community, morals and metaphysics and their replacement by print and electronics supporting a bias toward space: real estate, society, power, and practicality. But he did not leave the analysis here. In a manner mindful of his contemporary Patrick Geddes and the later work of Lewis Mumford, he extended it historically in both directions.

All too briefly, the final analysis takes this direction. There have been four major transformations of the scale of social organization in Western history. Each was founded upon a transformation in communication and later involved a transformation in politics and economy. The first was the unification of the Upper and Lower Nile into the first empire, a unification based primarily upon the invention of writing and mathematics, the availability of a cheap and light form of communication, papyrus, the civil engineering of the Nile, and rapid river transportation. The second was the creation of the Roman Empire again through papyrus and a simplified script, the civil engineering of roads and the diffusion of horse and chariot. Third, the creation of modern European empires based upon print, long range navigation, mining and later steam--what Patrick Geddes called paleotechnic civilization. The fourth transformation, and the one to which Innis devoted the least attention, is the modern American and Russian empires founded upon neotechnics: electronics and electricity, petroleum and jet aircraft.

Each of these escalations in the level of social order was founded on a spatially biased form of communication, a form that satisfied the ancient dream to reduce the price and expand the effective range of messages. Each was motivated by the desire to bring more space and larger populations under centralized, bureaucratic, administrative control. Each involved a reduction

in signalling time: the gap between the time a message is sent and received as a function of distance and fidelity. And each supported a monopoly of knowledge, grounded in the idea of space itself: that the goal of human endeavor was the conquest and subordination of space.

The impact of forms of communication, then, resides in the forms of social order and organization they call forth and facilitate, the forms of consciousness they support and the points at which they locate forms of authority. If this is what the phrase means then, in fact, the medium is the message.

To the demands of space, the demands for long distance communication in support of empire, Innis opposed the demands of time, the demand for community, history, and stability. He in part inherited, I believe, this concern from the Chicago community in which he studied, the community of John Dewey, George Herbert Mead and Robert Park. But he did something different than they with the concern, for he emphatically did not believe that the growth of modern communications technology could support a "Great Community," as it was, following Graham Wallas, called. The extension of technology was extension in space. Empires were continually outrunning the capability of communication and so were forced to rely on force. They also were continually threatened internally by the demands of time. The invention of institutions such as the Sabbath and Synagogue, the maintenance of ethnic languages, the persistent reassertions of ethnic nationalism were devices through which the demands of time and the margins of civilization were pressed against the center. But each extension in space by disrupting in the ways I have attempted to show, short distance communication, weakened the possibility of meeting the needs of time. Therefore, spatial empires forced persistent instability in political succession, armed insurrection, and radical generational discontinuities. He argued, in short, that some modes of communication support the needs of time

or proximate, short distance communication. While he speaks of clay, stone, parchment and the oral tradition as time binding, the only effective exposition he presents is in the case of the latter. Like John Dewey he recognized that it is only through oral communication that the demands of time and democracy can be met. Oral traditions preserve the continuity of culture, socialization and knowledge in time. However, they too can eventuate in rigid monopolies, for in adapting to the demands of time they lose the capacity to control space. This imbalance in civilization caused by an over-emphasis on the temporal or spatial factor, on the contradictory demands of long- and short-run communication, was the dynamic Innis discovered in the rise and fall of empires. And his plea was consistent; civilizations maintain themselves by paying attention to the factors, the media, that allow for balance, equilibrium between the demands of time and those of space.

In contrast to almost all other writing about technology, Innis constantly emphasized the limitations of technology in solving human problems. He did not so much emphasize the capacity of technology to bring about useful change as the amount of cultural loss that was attendant upon technical innovation and the degree to which given technologies, when imposed throughout social organization, finally destroy the very ends they are trying to achieve.

This strength in Innis' work derives from his mastery of dialectics and his unromantic location of North American history on the interfusions of technology, politics and economics--on the political economy of communications. Dialectics informs Innis' work both as a method of analysis and as an implicit attitude toward the possibilities of scholarship and human action. Dialectics teaches first of all that the most important terms of discourse can be known only through their opposite: individualism through collectivism, negative freedom through positive freedom, equality

through aristocracy, capitalism through feudalism, etc. Approaching events through contrary terms quickly leads one to recognize the contradictions and antimonies of existence and particularly how any system of thought or institutions harbors contradictions within it, possessing, therefore, the seeds of its own destruction. Innis always played off his principal terms against one another: time and space, Church and Empire, stability and change, written and oral traditions, Roman and Common Law, force and sanction.

The occurrence of any idea or phenomenon always led him to ask: "Where is its negation?" When one term of a polar set is actual or realized, the other is always potential. The advantages of dialectics reside in its sensitivity to the contradictory tendencies within phenomena, the awareness it creates of the potentialities of any situation, and finally its necessary attention to the dynamics of social life and to qualitative changes in the nature of the social process.

Dialectics also involves an attitude toward events, and, as Andrew Hacker has noted, it is a tragic attitude. Dialectics, as method, was forged in Europe, where people have understood the harshest lessons of history. The European experience of the rise and fall of empires, of the disintegration of once flourishing societies, of disappointment in the grandest of dreams teaches something of the limitations of human action and at the least cultivates an attitude of patience. American social thought, in contrast, is wedded to the doctrines of singular causation and the Englightenment view of history as a highway forever running in the same direction. In Innis one finds, in contrast, a scholar continually trying to search out the boundaries of the possible, the concrete possibilities of history and the limitations of human action. Moreover, by accepting the principle of contradiction, Innis tried to make it work for mankind by emphasizing balance, restraint and counter-

vailing tendency. This attitude toward history and contemporary society serves as a protection against the wild oscillations between despair and euphoria, between self-righteous moralism and nihilism typical of so much scholarship.

Dialectics was for Innis both a method of analysis and a guide to social policy, the ideal combination of scholarship and politics. In both scholarship and politics Innis raged against monopolies of thought, wealth and power, and emphasized balance and countervailing force: time against space, duration against extent, morals against techniques. He recognized that any orientation, policy, social arrangement or system of thought had the defects of its virtues. Like Kenneth Burke he emphasized that ideas obey the Greek principle of entelechy; they perfect themselves and then they are most subversive. The only solution to the problem of perfection was to balance ideas and orientations with countervailing forces for only thus could any stability, permanence and sanity be achieved in society.

Innis applied these methods and attitudes to the development of North America and to the historical role of media of communication. While recognizing the centrality of media of communication to social life, he avoided mythicalizing these media and attaching them to edenic images currently so much in vogue. In the technology of print and later electronics he saw the <u>potentiality</u> for the perfection of a utilitarian attitude and the indefinite expansion of the administrative mentality and imperial politics. Print and electronics were <u>biased</u> toward supporting one type of civilization: a power house society dedicated to wealth, power and productivity, to technical perfectionism and ethical nihilism. No amount of rhetorical varnish would reverse this pattern; only the work of politics and the day by day attempt to maintain another and contradictory pattern of life, thought, and

scholarship. Innis pointed out, the demise of culture could be dispelled only by a deliberate cutting down of the influence of modern technics and cultivation of the realms of art, ethics, and politics. He identified the oral tradition with its emphasis on dialogue, dialectics, ethics, and metaphysics as the countervailing force to modern technics. But support of such traditions or media requires that elements of stability be maintained, that mobility be controlled, that communities of association and styles of life be freed from the blinding obsolescence of technical change. However, the demands of growth, empire and technology put an emphasis--in education, politics, and social life generally--on those media which fostered administrative efficiency such as print and electronics. Only by supporting the countervailing power of substantive rationality, democracy, time and ethics would the bias of technology be controlled.

The age of electronic communication has posed anew all the questions Innis raised. This is an age of satellites and cable television, video phones and computer information utilities, telex and pay television, and also multinational corporations and common markets. There have been a number of responses to these developments but none of them possesses the power and scope of Innis' Canadian theory of communications. The age of electrical machines has been savagely portrayed in dystopian tracts of the same kind that emerged at the onset of industrialization. Others have tried to analyze the new technology in terms of the qualitative differences between mechanics and electricity, between paleotechnic and neotechnic technology. Still others have pinned their analysis to the difference between communications organized on socialist as opposed to capitalist principles. Another solution to our dilemmas is offered by a cadre of technocrats, committed to no political theory, who energetically demonstrate how the new technology will solve every

problem of politics, the economy, health, even loneliness and isolation. They propose to solve the "problem of communication" by identifying the entire human habitat with it. Finally, modern utopians have resurrected the original language of industrialism and presented a bright new world aborning by the automatic action of electrical machines. One finds among them the pleasant notion that we are now outgrowing the nation state and that a new form of world order is emerging, a global village, a universal brotherhood or world government on a shrunken planet--spaceship earth.

Most of this is pleasant if not dangerous nonsense. What we are witnessing is another increase in the scale of social organization based upon electronic communication. We are witnessing the imperial struggle of the early age of print all over again but now with communication systems that transmit messages at the extremes of the laws of physics. We are witnessing larger federations of power developing out of the nation state: the Soviet bloc, the Common Market, North America. Institutional structures are already being evolved in multinational corporations, regional federations and modern cartels. Multinationals could not exist without jet planes, advanced computers and electronic communication. Harold Geneen was appalled by the lack of central direction when he took control of ITT:

> When we started off we had 110,000 people in Europe. This is wayback at the beginning. We didn't even have an office in Europe. We had one fellow, and he had about five assistants, and he used to travel around on airlines and hold meetings in hotel rooms, for 110,000. Today we have coordinated management group in Brussels, which is our headquarters for Europe, which would comprise about 300 executives, and they monitor all of our operations in Europe.

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*Anthony Sampson, The Sovereign State of ITT, Greenwich, Connecticut, Fawcett Books, 1974, p. 97.

Such organizations are even creating, through electronics, a new culture. In the nomadic travels of ITT executives, the telephones become an obsession, as Anthony Sampson puts it, "not only because ITT makes them but because they abolish distance and provide a reassuring link with home base. The more uprooted the way of life, the more dependent the multinational managers become on their company, which forms the carapace within which they travel. I overheard one ITT manager in his Brussels hotel joking on the telephone for twenty minutes with New York...Inside these giant organisms differences of nationality seem often less important than differences of company."*

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*Ibid, p. 99

There is also a pattern of decentralization occurring. First, through satellite communication there is a thrusting out of cultures into new regions of space. This movement is part of a system of national and regional rivalries, which find expression in United Nations debates on international regulation of satellite broadcasting. If in a few years television images can be transmitted over national boundaries to home receivers, the United States and the Soviet Union as the two largest electronic powers can enlarge the region and particularity of their influence. Naturally, there are disagreements over international satellite regulations, but the direction of United States policy is clear and flourishes the same rhetorical strategies in use for over a century. At a recent United Nations debate, as reported in the New York Times, the United States representative argued that the United States, while amenable to international satellite regulation, opposed restrictions on direct telecasting over national boundaries. He declared that the new technology could be used in an "effective and constructive way"

without inhibiting what offers potentional for great contributions to education and communication. "In this world of rapidly increasing contacts and interaction among states, we need to understand more about each other rather than less." The United States representative objected to the concept of "prior consent" that the advocates of strict regulation were advocating. 'Such a principle could rule out direct broadcasting for entire regions. Because a satellite beam would usually cover many states, one country's objection to international broadcasts could prohibit many others from receiving such broadcasts even if they specifically desired to receive them." Well, the French say it better but the more things change...

Beyond the use of satellites for direct, nation to person broadcasting, there is a second dimension to the current decentralization and extension in space of electronic communication. The second arena in which the United States and the Soviet Union are in competition is the arena of space itself. The exploration and utilization of space is in its infancy and one cannot predict what the ultimate uses of these lifeless colonies will be. However, the delay in space exploration did not derive from deficiencies of rocket thrust. The real delay was the development of a system of communication that would allow space travel to be controlled from earth. As printing went with sea-going navigation and the telegraph with the railway, electronic and computer-based communication goes with the space ship. In the absence of communication that matches the speed of light and exceeds the speed of the brain, some hardy pioneer might have tried to thrust himself off to the moon, although capital costs alone, as in the age of navigation, make that unlikely. The availability of electronic communication with its capacity to increase control by reducing signalling time has turned space into the next area of expansion. The

meaning of electronic communication is not in the news that informs us or the entertainment that distracts us but in the new possibility to turn space into a domain of geographical and political competition for the most electronically advanced nations. All of space is now in the potential control of Houston.

These new institutions and ambitions are potential rather than actual. Perhaps what is most needed is a Bismarck to bring out of them a new order of politics and a Walt Whitman to call them forth vividly in consciousness.

It was Whitman in 1870 when the railroad and telegraph were binding the American West to the East who said, "Long ere the second centennial arrives there will be some forty to fifty great states, among them Canada and Cuba.... The Pacific will be ours and the Atlantic mainly ours. There will be daily electric communications with every part of the globe.... The individuality of one nation must then, as always lead the world. Can there be any doubt who the leader ought to be?"

It all sounds absurd, yet a recent and bestselling Canadian novel, Richard Rohmer's Ultimatum, describes the invasion and occupation of Canada by the United States. Robin Mathews reviewing recent Canadian political novels in This Magazine testifies to what he calls a "very deep Canadian intuition," namely that the U.S. will not permit Canada self-determination. Canada will be an economic colony, open as an unhindered resource base and market, or we will face the U.S. Marines." But Canada, as Mathews knows, was invaded long ago and the Canadian imagination is already occupied by America. We need not here rehearse the evidence; it is too well known: the struggle over Time and Reader's Digest, the American television programs and movies, the ubiquitous motels and fast food franchises. Under the circumstances one can understand and

appreciate the lures of nationalism, even if it too is one of the least attractive of modern doctrines. Innis flirted with it and felt its impulses deeply. He once wrote:

> Whatever hope of continued autonomy Canada may have in the future must depend on her success in withstanding American influence and in assisting the development of a third bloc designed to withstand the pressure of the United State and Russia. But there is little evidence that she is capable of these herculean efforts and much that she will continue to be regarded as an instrument of the United States....Neither a nation, nor a commonwealth, nor a civilization can endure in which one half in slavery believes itself free because of a statement in the Bill of Rights and attempts to enslave the other half which is free. Freedom of the press under the Bill of Rights accentuated the printed tradition, destroyed freedom of speech and broke the relations with the oral tradition of Europe.

But Innis' response to this situation was to erect a history and theory of communications that while grounded in the particularities of Canadian experience could speak eloquently to others. That same task, call it as he did "A Plea for Time," awaits our renewed attention.